

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-2. (canceled).

3. (previously presented): An image pick-up apparatus for picking up a plurality of images being chronologically arranged along time-series to provide an image, comprising:

a means for obtaining information about changes in gray level value between said plurality of images; and

a means for determining a timing for selecting at least one of said plurality of picked up images,

wherein said selection is based on a result from said obtained information,

wherein said means for obtaining information compares said gray level value of pixels in an image of said plurality of images with similarly positioned pixels in another image of said plurality of images, and obtains a number of pixels whose said gray-level value has increased and a number of pixels whose said gray-level value has decreased, and

wherein said means for determining a timing determines a timing for extracting one image from said plurality of images, when said number of pixels with increase in said gray-level value is less than the number of pixels with decrease in said gray level value.

4. (previously presented): An image pick-up apparatus for picking up a plurality of images being chronologically arranged along time-series to provide an image, comprising:

- a means for obtaining information about changes in gray level value between said plurality of images; and
- a means for determining a timing for selecting at least one of said plurality of picked up images,

wherein said selection is based on a result from said obtained information,

wherein said means for obtaining information compares said gray level value of pixels in an image of said plurality of images with similarly positioned pixels in another image of said plurality of images, and obtains a number of pixels whose said gray-level value has increased and a number of pixels whose said gray-level value has decreased, and

wherein said means for determining a timing determines a timing for extracting one image from said plurality of images when a predetermined threshold value of pixel numbers is greater than an absolute value of a difference between said number of pixels with increase in said gray-level value and the number of pixels with decrease in said gray-level value.

5. (previously presented): The image pick-up apparatus according to Claim 3, wherein,

said image information obtaining means for each image in said plurality of images obtains a number of pixels whose said gray-level value exceeds a predetermined gray-level threshold value; and

said timing determining means determines said timing for extracting said one image, when said number of pixels of the one image with said gray-level value above the gray-level threshold value exceeds a predetermined pixel number threshold.

6. (previously presented): An image pick-up apparatus for picking up a plurality of images being chronologically arranged along time-series to provide an image, comprising:

a means for obtaining information about changes in gray level value between said plurality of images; and

a means for determining a timing for selecting at least one of said plurality of picked up images,

wherein said selection is based on a result from said obtained information,

wherein said means for obtaining information compares said gray level value of pixels in an image of said plurality of images with similarly positioned pixels in another image of said plurality of images, and obtains a number of pixels whose said gray-level value has increased and a number of pixels whose said gray-level value has decreased,

wherein said image information obtaining means for each image in said plurality of images obtains a number of pixels with said gray-level value exceeding a predetermined gray level threshold value, and

wherein said timing determining means determines said timing for extracting one image from said plurality of images, when said number of pixels with said gray-level value exceeding said predetermined gray level threshold value outnumbers a predetermined pixel numbers

threshold, and further when an absolute value of a difference between said number of pixels with increase in said gray-level value and the number of pixels with decrease in said gray-level value is less than a second predetermined pixel number threshold.

7-8. (canceled).

9. (previously presented): An image pick-up apparatus for picking up a plurality of images being chronologically arranged along time-series to provide an image, comprising:

a means for obtaining information about changes in gray level value between said plurality of images; and

a means for determining a timing for selecting at least one of said plurality of picked up images,

wherein said selection is based on a result from said obtained information,

wherein said means for obtaining information compares said gray level value of pixels in an image of said plurality of images with similarly positioned pixels in another image of said plurality of images, and obtains a number of pixels whose said gray-level value has increased and a number of pixels whose said gray-level value has decreased,

wherein said plurality of images comprises at least two successive images which had been successively picked up by said image pick-up apparatus,

wherein a first image from said at least two successive images is a first frame and a second image from said at least two images is a second frame, and

wherein said apparatus further comprises:

an image picking up means for picking up images;

a memory means for storing said images; comprising first memory means and second memory means for said plurality of images, and

a data processing means comprising: a pixel comparing means, a pixel number counting means for counting a number of said pixels whose gray level value has changed, and said timing determining means, and

an output means.

10. (previously presented): The image pick-up apparatus according to Claim 9, wherein said first frame is stored in said first memory means and said second frame picked up immediately after said first frame is stored in said second memory means.

11. (previously presented): The image pick-up apparatus according to Claim 9, wherein said pixel comparing means compares a gray level value of each pixel in said first frame with a gray level value of each pixel in said second frame pixel corresponding to said each pixel in said first frame.

12-14. (canceled).

15. (previously presented): An image pick-up method for picking up a plurality of images being chronologically arranged along time-series to provide an image, comprising:

- obtaining information about changes in gray level value between said plurality of images;
- and
- deciding a timing at which at least one of said plurality of picked up images is selected, wherein said selection is based upon on a result from said obtained information, wherein obtaining said information further comprises:
 - comparing said gray level value of pixels in one image from said plurality of images with similarly positioned pixels of another from said plurality of images, and
 - obtaining a number of pixels in said one image whose said gray-level value has increased and a number of pixels in said one image whose said gray-level value has decreased,
 - and
 - wherein determining a timing for extracting at least one image from said plurality of images is based on when said number of pixels with increase in said gray-level value is less than the number of pixels with decrease in said gray-level value.

16. (previously presented): An image pick-up method for picking up a plurality of images being chronologically arranged along time-series to provide an image, comprising:

- obtaining information about changes in gray level value between said plurality of images;
- and
- deciding a timing at which at least one of said plurality of picked up images is selected,

wherein said selection is based upon on a result from said obtained information,

wherein obtaining said information further comprises:

comparing said gray level value of pixels in one image from said plurality of images with similarly positioned pixels of another from said plurality of images, and

obtaining a number of pixels in said one image whose said gray-level value has increased and a number of pixels in said one image whose said gray-level value has decreased, and

wherein determining a timing for extracting an image is based on a predetermined threshold value of pixel numbers being greater than an absolute value of a difference between said number of pixels with increase in said gray-level value and the number of pixels with decrease in said gray-level value.

17. (previously presented): An image pick-up method for picking up a plurality of images being chronologically arranged along time-series to provide an image, comprising:

obtaining information about changes in gray level value between said plurality of images; and

deciding a timing at which at least one of said plurality of picked up images is selected, wherein said selection is based upon on a result from said obtained information, and wherein:

said step of obtaining said information obtains a number of pixels of an image of said plurality of images having said gray-level value exceeding a predetermined gray level threshold value; and

said step of deciding a timing for extracting one image decides a timing where said number of pixels with said gray-level value exceeding said predetermined gray level threshold value outnumbers a predetermined threshold value of pixel numbers, and further where said number of pixels with increase in said gray-level value is less than the number of pixels with decrease in said gray-level value.

18. (previously presented): An image pick-up method for picking up a plurality of images being chronologically arranged along time-series to provide an image, comprising:

obtaining information about changes in gray level value between said plurality of images; and

deciding a timing at which at least one of said plurality of picked up images is selected, wherein said selection is based upon on a result from said obtained information, and wherein:

said step of obtaining information obtains a number of pixels in an image from said plurality of images, with said gray-level value exceeding a predetermined gray level threshold value; and

said step of determining a timing determines said timing when said number of pixels with said gray-level value exceeding a predetermined gray level threshold value

outnumbers a predetermined threshold value of pixel numbers, and further when an absolute value of a difference between said number of pixels with increase in said gray-level value and the number of pixels with decrease in said gray-level value is less than a second predetermined pixel number threshold.

19-20. (canceled).

21. (previously presented): An image pick-up method for picking up a plurality of images being chronologically arranged along time-series to provide an image, comprising:

- obtaining information about changes in gray level value between said plurality of images;
- and
- deciding a timing at which at least one of said plurality of picked up images is selected, wherein said selection is based upon on a result from said obtained information, and wherein said method further comprises:
 - picking up said plurality of images with an image picking up means;
 - storing said images by storing said first frame image data from said at least two successive images into a first memory means and storing said second frame image data from said at least two successive images into a second memory means;
 - comparing and counting number of pixels with a change in gray level value by using data processing means; and

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determining a timing to extract at least one suitable image for image processing,
and
outputting said at least one suitable image.

22-23. (canceled).